Photo by Matthew J. Thomas

Class C Mishap Summary

By ADCS(AW/SW) Gary Dennis

From Dec. 1, 2004, to Feb. 28, 2005, the Navy and Marine Corps had 25 Class Cs that involved 25 aircraft. The damage total was $1,780,753.

A P-3C returned early from a mission after the crew suspected the No. 3 engine had ingested a bird. Maintenance control issued a bird-strike conditional inspection in accordance with the maintenance-instruction manuals. Two power-plants mechanics inspected the engine, but their results were inconclusive. Maintenance control then directed high-power maintenance turns, which revealed the No. 3 engine's efficiency had dropped from 101.2 percent to 94.8 percent.

Both power-plant mechanics were assigned to troubleshoot this problem. Knowing they would have to work the weekend if this aircraft wasn't fully mission capable (FMC) by Friday evening, the two worked from 0645 to 2200 that day and returned at 0645 the next morning to continue the same schedule.

Maintenance control directed them to borescope the No. 3 engine. The power-plants CDI found no damage in the turbine section of the engine, so the two decided to borescope the compressor section. The maintenance-instruction manual (MIM) does not contain guidance for this job.

The two mechs removed the fifth-stage poppet and discovered what they thought to be an abnormality on one of the compressor blades. They wanted to find the power-plants collateral-duty QAR to get a second opinion. The AD1 CDI left the borescope in the engine and directed the AD2 to remain outside with the gear while he went back to the hangar.

Unfortunately, the collateral-duty QAR had left for an appointment out in town, so maintenance control directed a power-plants collateral-duty QAR assigned to the line division to assist the AD1. The QAR said he wanted to dive the intake. The AD1 objected, though, saying that he already had done that four or five times and that he wanted to look at what he had found on the borescope.

The collateral-duty QAR, however, told the AD1 that he still wanted to dive the intake himself. Frustrated, the AD1 walked off to take a smoke break. The QAR, meanwhile, proceeded outside to dive the intake. There, he met the AD2, who didn't mention the borescope still was inserted in the compressor.

The collateral-duty QAR tried to rotate the propeller, so he could gain access to the intake, which was blocked by one of the propeller blades. He was having difficulty getting a good footing because patches of ice were on the ramp. He asked the AD2 to help him rotate the propeller. Together, they only were able to rotate the propeller about an inch.

The collateral-duty QAR returned to the hangar to get a pair of ice cleats. When he returned to the aircraft, the AD finally told him that the borescope still was inserted in the compressor. When the two removed the borescope from the compressor, the tip of the borescope, which had been severed, remained inside the compressor.

After the QAR and AD2 notified maintenance control about the problem, the job was halted. The engine was removed and turned in to AIMD, so the borescope tip could be retrieved. AIMD found extensive damage to the fifth-stage blades of the compressor rotor. Obviously, pressure, fatigue and lack of situational awareness and communication were key factors in this incident.

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